RSC Sustainability

rsc.li/rscsus

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

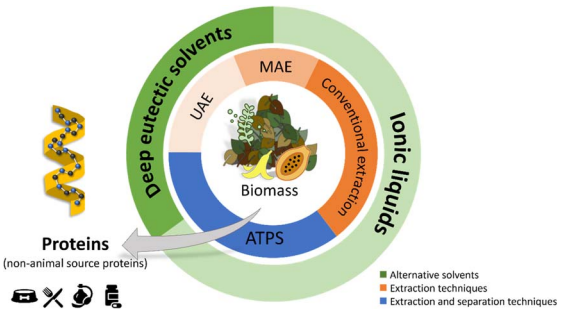
ISSN 2753-8125 CODEN RSSUAN 1(6) 1301–1568 (2023)

Cover
See V. Bressi *et al.*, pp. 1404–1415. Image reproduced by permission of V. Bressi from *RSC. Sustainability.*, 2023, **1**, 1404.

Inside cover
See Mara G. Freire, João A. P. Coutinho *et al.*, pp. 1314–1331. Image reproduced by permission of João A. P. Coutinho from *RSC. Sustainability.*, 2023, **1**, 1314.

EDITORIAL

CRITICAL REVIEWS



RSC Sustainability (electronic: ISSN 2753-8125) is published 6 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

RSC Sustainability is a Gold Open Access journal and all articles are free to read. Please email orders@rsc.org to register your interest or contact Royal Society of Chemistry Order Department, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK
Tel +44 (0)1223 432398;
E-mail: **orders@rsc.org**

RSC Sustainability

rsc.li/RSCSus

RSC Sustainability publishes experimental and theoretical work across the breadth of materials science.

Information for Authors

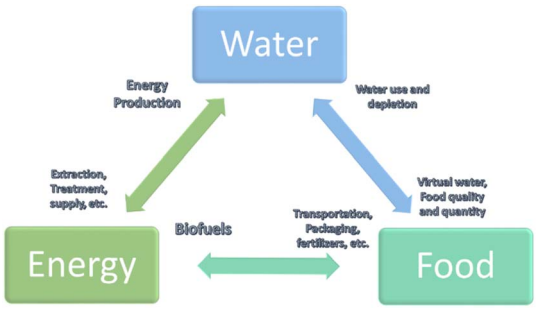
Full details on how to submit material for publication in RSC Sustainability are given in the Instructions for Authors (available from **http://www.rsc.org/authors**). Submissions should be made via the journal's homepage: **rsc.li/RSCSus**

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of Chemistry, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)–Reproduced by permission of the Royal Society of Chemistry.

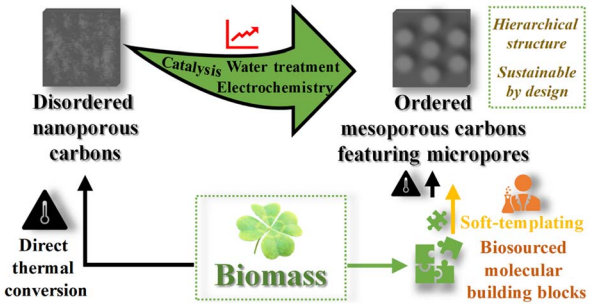
Registered charity number: 207890

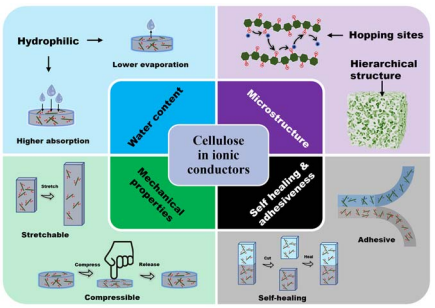
ROYAL SOCIETY OF CHEMISTRY

CRITICAL REVIEWS



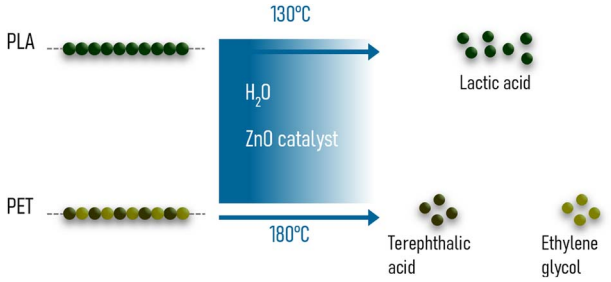
TUTORIAL REVIEWS





PERSPECTIVE

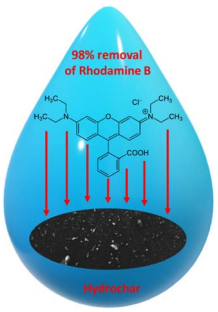
COMMUNICATION



Hydrolytic depolymerisation of polyesters over heterogeneous ZnO catalyst

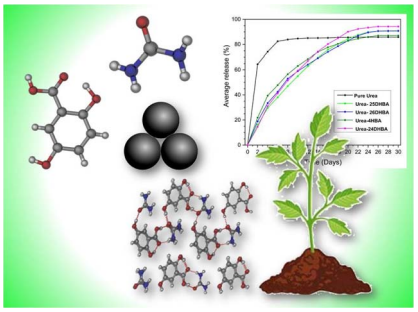
Francesca Liguori, Carmen Moreno-Marrodán, Werner Oberhauser, Elisa Passaglia and Pierluigi Barbaro*

PAPERS



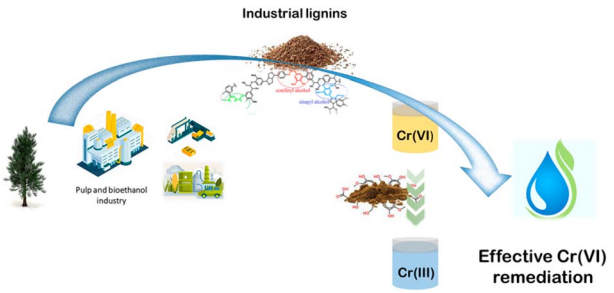
Hydrochar from *Sargassum muticum*: a sustainable approach for high-capacity removal of Rhodamine B dye

D. Spagnuolo, D. Iannazzo, T. Len, A. M. Balu, M. Morabito, G. Genovese, C. Espro and V. Bressi*



Mechanosynthesis of urea–hydroxybenzoic acid cocrystals as sustained-release nitrogen fertilizer

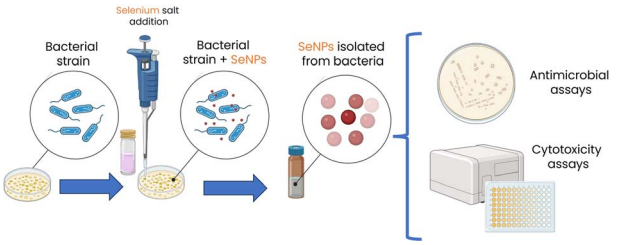
Trishna Rajbongshi, Shalika Parakatawella, Diptajyoti Gogoi, Poonam Deka, Nadeesh M. Adassooriya* and Ranjit Thakuria*

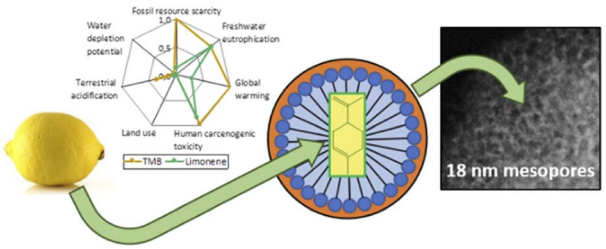


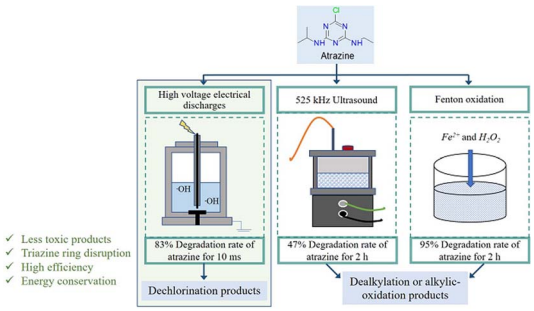
Industrial lignins as efficient biosorbents for Cr(VI) water remediation: transforming a waste into an added value material

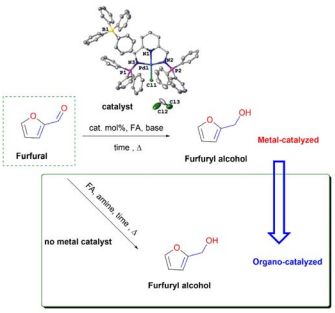
Marianna Vescovi, Matteo Melegari, Cristina Gazzurelli, Monica Maffini, Claudio Mucchino, Paolo Pio Mazzeo, Mauro Carcelli, Jacopo Perego, Andrea Migliori, Giuliano Leonardi, Suvi Pietarinen, Paolo Pelagatti* and Dominga Rogolino*

PAPERS



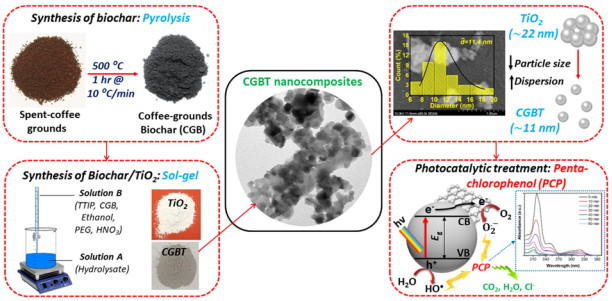






PAPERS

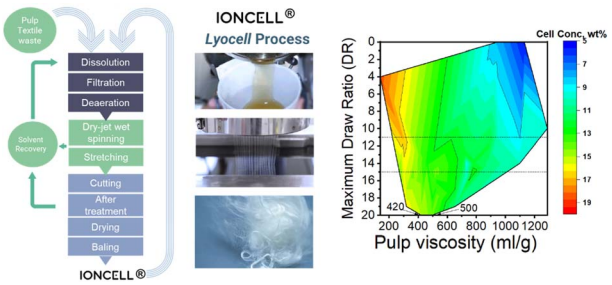
1484



Spent-coffee grounds-derived biochar-supported heterogeneous photocatalyst: a performance evaluation and mechanistic approach for the degradation of pentachlorophenol

Rahil Changotra, Himadri Rajput, Jie Yang, Mita Dasog* and Quan (Sophia) He*

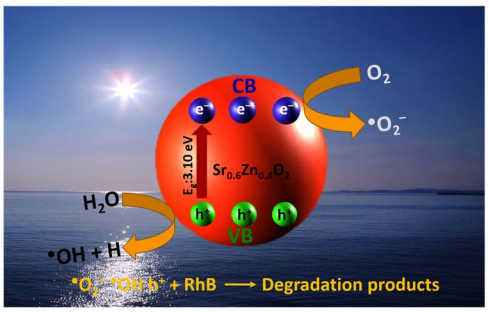
1497



Influence of DP and MMD of the pulps used in the Ioncell® process on processability and fiber properties

Yibo Ma,* Xiang You, Kaarlo Nieminen, Daisuke Sawada and Herbert Sixta*

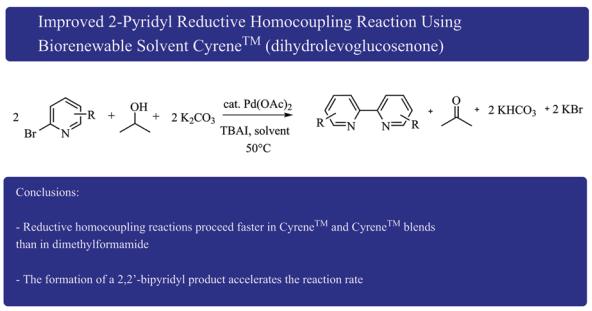
1511



Effective photocatalytic degradation of rhodamine-B over Zn-doped BaO_2 and SrO_2 composites under UV and sunlight irradiation

Kirankumar Venkatesan Savunthari, Daneshwaran Balaji, Nivedita Sudheer, Mittal Bathwar, Manjunath Rangasamy, Ganesh Kumar Dhandabani, Alain R. Puente Santiago, Sumathi Shanmugam,* Kien-Voon Kong* and Vijayaraghavan R*

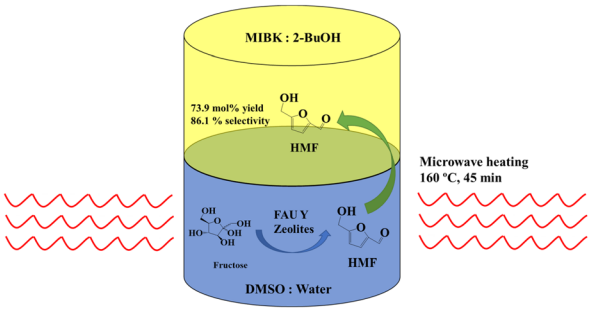
1522

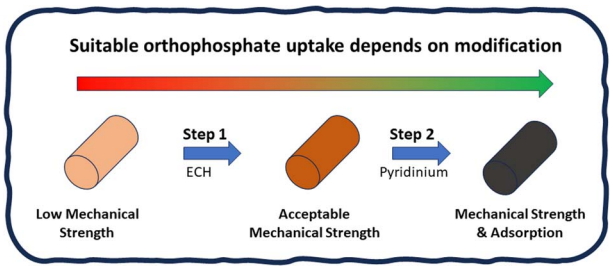


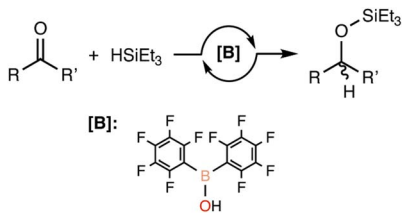
Improved 2-pyridyl reductive homocoupling reaction using biorenewable solvent Cyrene™ (dihydrolevoglucosenone)

Daniel A. Webb, Zeid Alsudani, Guolin Xu, Peng Gao and Leggy A. Arnold*

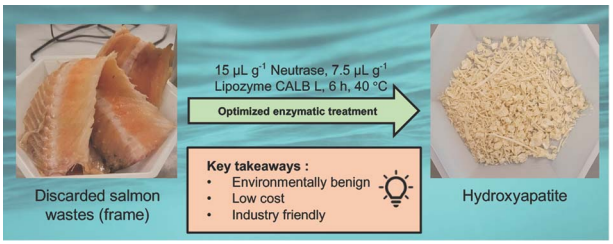
PAPERS







- Lewis acidity assessed
- Stability of borane catalysts explored towards air and moisture
- Catalysis shown under ambient conditions, in undried solvents, and benchmarked to state-of-the-art Lewis acid catalysts



CORRECTION

1565

Correction: Removal of metals and inorganics from rendered fat using polyamine-modified cellulose nanocrystals

Ezequiel Vidal, Frank Alexis, José M. Camiña, Carlos D. Garcia* and Daniel C. Whitehead*